AMENDMENTS TO THE CLAIMS

1. (Currently amended) An optical recording medium for recording and retrieving information with an optical beam comprising:

a substrate;

a transparent layer, having a predetermined thickness such that the reflectivity after recording is decreased, which is reactive (optically or thermally) with a reflecting layer disposed thereon to form a semi-transparent reflective area of alloy/compound ~~near~~ across the interface there between, comprising a material selected from the group consisting of Si, Ge, GaP, InP, GaAs, InAs, GaSb, InSb, In-Sn oxide, tin oxide, indium oxide, zinc oxide, titanium oxide, Sb-Sn oxide, or combinations thereof disposed on the substrate; and

a reflecting layer disposed on the transparent layer, which is reactive (optically or thermally) with the transparent layer of the predetermined thickness to form a semi-transparent reflective area of alloy/compound ~~near~~ across the interface of transparent layer and reflecting layer after the optical recording medium is exposed to the optical

beam, wherein the semi-transparent reflective area activates a mechanism that decreases the reflectivity after recording;

wherein the mechanism reduces the effective thicknesses of the transparent layer and the reflecting layer, and changes the optical-path of the incident and reflected light from the optical beam, thereby shifting constructive or destructive interference and altering the reflective intensity by the semi-transparent reflective area.

2.-3. (Canceled)

4. (Previously presented) The optical recording medium of claim 1, wherein the mechanism distorts optical constants (n & k) and thereby alters the overall reflective intensity.

5. (Canceled)

6. (Previously presented) The optical recording medium of claim 1, wherein the mechanism transforms the polarization angle and thereby alters the reflective intensity by the semi-transparent reflective area.

7. (Original) The optical recording medium of claim 1, wherein the transparent layer has a thickness ranging from 5 to 500 nm.

8. (Canceled)

9. (Original) The optical recording medium of claim 1, wherein the reflecting layer has a thickness ranging from 1 to 500 nm.

10. (Original) The optical recording medium of claim 1, wherein the reflecting layer comprises a material selected from the group consisting of Ag, Al, Au, Pt, Cu, In, Sn, W, Ir, Re, Rh, Ta, and their alloys, or combinations thereof.

11. (Original) The optical recording medium of claim 1, further comprising a thermal-manipulating layer between the substrate and the transparent layer.

12. (Original) The optical recording medium of claim 1, further comprising a protective layer disposed on the reflecting layer.

13. (Original) The optical recording medium of claim 12, further comprising a thermal-manipulating layer between the reflecting layer and the protective layer.

14. (Previously presented) The optical recording medium of claim 1, wherein the semi-transparent reflective area is more reflective than the reflecting layer.

15. (Previously presented) The optical recording medium of claim 1, wherein the semi-transparent reflective area is less reflective than the reflecting layer.

16. (Currently amended) A method of optically recording information on an optical recording medium comprising a substrate, a transparent layer, having a predetermined thickness such that the reflectivity after recording is decreased, which is reactive (optically or thermally) with a reflecting layer disposed thereon to form a semi-transparent reflective area of alloy/compound ~~near~~ across the interface there between, comprising a material selected from the group consisting of Si, Ge, GaP, InP, GaAs, InAs, GaSb, InSb, In-Sn oxide, tin oxide, indium oxide, zinc oxide, titanium oxide, Sb-Sn oxide, or combinations thereof disposed on the substrate, and a reflecting layer reactive (optically or thermally) with the transparent layer of the predetermined thickness disposed on the transparent layer, which comprises irradiating the transparent layer of the predetermined thickness and reflecting layer with an optical beam to form a semi-transparent reflective area of alloy/compound therebetween, wherein the semi-transparent reflective area is able to activate a mechanism that decreases the reflectivity after recording, wherein the mechanism reduces the effective thicknesses of the transparent layer and the reflecting layer, and changes the optical-path of the incident and reflected light from the optical beam, thereby shifting constructive or destructive interference and altering the reflective intensity by the semi-transparent reflective area.

17. (Canceled)

18. (Previously presented) The method as claimed in claim 16, wherein the mechanism distorts optical constants (n & k) and thereby alters the overall reflective intensity by the semi-transparent reflective area.

19. (Canceled)

20. (Previously presented) The method as claimed in claim 16, wherein the mechanism transforms the polarization angle and thereby alters the reflective intensity by the semi-transparent reflective area.

21. (Original) The method as claimed in claim 16, wherein the transparent layer has a thickness ranging from 5 to 500 nm.

22. (Canceled)

23. (Original) The method as claimed in claim 16, wherein the reflecting layer has a thickness ranging from 1 to 500 nm.

24. (Original) The method as claimed in claim 16, wherein the reflecting layer comprises a material selected from the group consisting of Ag, Al, Au, Pt, Cu, In, Sn, W, Ir, Re, Rh, Ta, and their alloys, or combinations thereof.

25. (Original) The method as claimed in claim 16, wherein the semi-transparent reflective area is more reflective than the reflecting layer.

26. (Original) The method as claimed in claim 16, wherein the semi-transparent reflective area is less reflective than the reflecting layer.

27. (Currently amended) An optical recording medium for recording and retrieving information with an optical beam comprising:

a substrate;

a transparent layer, comprising at least an oxide selected from the group consisting of In-Sn oxide, tin oxide, indium oxide, zinc oxide, titanium oxide, Sb-Sn oxide, or combinations thereof, disposed on the substrate; and

a reflecting layer disposed on the transparent layer, which is reactive (optically or thermally) with the transparent layer and forms a semi-transparent reflective area of alloy/compound ~~near~~ across the interface of transparent layer and reflecting layer after the optical recording medium is exposed to the optical beam, wherein the semi-transparent

reflective area activates a mechanism that decreases the reflectivity after recording, wherein the mechanism reduces the effective thicknesses of the transparent layer and the reflecting layer, and changes the optical-path of the incident and reflected light from the optical beam, thereby shifting constructive or destructive interference and altering the reflective intensity by the semi-transparent reflective area.

28. (Canceled)

29. (Previously presented) The optical recording medium of claim 27, wherein the mechanism distorts optical constants (n & k) and thereby alters the overall reflective intensity.

30. (Canceled)

31. (Previously presented) The optical recording medium of claim 27, wherein the mechanism transforms the polarization angle and thereby alters the reflective intensity by the semi-transparent reflective area.

32. (Previously presented) The optical recording medium of claim 27, wherein the transparent layer has a thickness ranging from 5 to 500 nm.

33. (Previously presented) The optical recording medium of claim 27, wherein the reflecting layer has a thickness ranging from 1 to 500 nm.

34. (Previously presented) The optical recording medium of claim 27, wherein the reflecting layer comprises a material selected from the group consisting of Ag, Al, Au, Pt, Cu, In, Sn, W, Ir, Re, Rh, Ta, and their alloys, or combinations thereof.

35. (Previously presented) The optical recording medium of claim 27, further comprising a thermal-manipulating layer between the substrate and the transparent layer.

36. (Previously presented) The optical recording medium of claim 27, further comprising a protective layer disposed on the reflecting layer.

37. (Previously presented) The optical recording medium of claim 36, further comprising a thermal-manipulating layer between the reflecting layer and the protective layer.

38. (Previously presented) The optical recording medium of claim 27, wherein the semi-transparent reflective area is more reflective than the reflecting layer.

39. (Previously presented) The optical recording medium of claim 27, wherein the semi-transparent reflective area is less reflective than the reflecting layer.

40. (Currently Amended) An optical recording medium for recording and retrieving information with an optical beam comprising:

a substrate;

a transparent layer, having a predetermined thickness ranging from 5 to 500nm such that the reflectivity after recording is decreased, which is reactive (optically or thermally) with a reflecting layer disposed thereon to form a semi-transparent reflective area of alloy/compound ~~near~~ across the interface there between, comprising a material selected from the group consisting of Si, Ge, GaP, InP, GaAs, InAs, GaSb, InSb, or combinations thereof disposed on the substrate; and

a reflecting layer disposed on the transparent layer, which is reactive (optically or thermally) with the transparent layer of the predetermined thickness to form a semi-transparent reflective area of alloy/compound ~~near~~ across the interface of transparent layer and reflecting layer after the

optical recording medium is exposed to the optical beam, wherein the semi-transparent reflective area activates a mechanism that decreases the reflectivity after recording,

wherein the mechanism reduces the effective thicknesses of the transparent layer and the reflecting layer, and changes the optical-path of the incident and reflected light from the optical beam, thereby shifting constructive or destructive interference and altering the reflective intensity by the semi-transparent reflective area.

41. (Previously presented) The optical recording medium of claim 40, wherein the mechanism distorts optical constants (n & k) and thereby alters the overall reflective intensity.

42. (Canceled)

43. (Previously presented) The optical recording medium of claim 40, wherein the mechanism transforms the polarization angle and thereby alters the reflective intensity by the semi-transparent reflective area.

44. (Previously presented) The optical recording medium of claim 40, wherein the reflecting layer has a thickness ranging from 1 to 500 nm.

45. (Previously presented) The optical recording medium of claim 40, wherein the reflecting layer comprises a material selected from the group consisting of Ag, Al, Au, Pt, Cu, In, Sn, W, Ir, Re, Rh, Ta, and their alloys, or combinations thereof.